

SHORT COMMUNICATIONS

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CAN *TROGLODYTES AEDON* IN ARGENTINA "MIMIC" THE SONGS OF *THRYOMANES BEWICKII*?¹

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Key words: *House wren; Bewick's wren; Troglodytes aedon; Thryomanes bewickii; song; mimicry.*

Vocal imitation is the copy of a conspecific call or song model, while vocal mimicry is the copy of calls or songs of other species. Both phenomena are usually inferred on the basis of song repertory resemblances between wild individuals belonging to the same or different species, respectively. However, in species with large repertoires the resemblance of songs between different subjects may be due to chance alone and, for this reason, song sharing is not considered as unequivocal proof of vocal imitation or mimicry (Baylis 1982). The probability of chance as a cause of similarity may be reduced (but not excluded) if the number of common song elements becomes large enough, or if there is a correspondence in its order of presentation, or when the resemblance of shared elements also involves more subtle details of the acoustic structure. Such is the case of two *Troglodytes aedon* individuals from Oregon, whose songs resemble those of the sympatric *Thryomanes bewickii* both in syllable types structure and sequence (Kroodsma 1973). These findings and those of Murray (1944) could be considered a good example of mimicry by *T. aedon*.

Since *T. bewickii* are distributed from United States to Mexico, and song mimicry implies that the "mimic" must hear the model (at least during the sensitive period of vocal learning), it could be predicted that the syllable types of *T. bewickii* will not be present in the song repertoire of allopatric populations of *T. aedon*. Herein I report the occurrence of putative *T. bewickii* syllables in the songs of *T. aedon* from Argentina.

METHODS

From September 1988 to February of 1989, songs from 18 adults of *T. aedon* were recorded, at the following localities: eight individuals in the University of Luján Campus, Partido of Luján (total = 70 songs, ranging

from 3-14 songs/individual); eight in the Reserve of the Elsa Shaw de Pearson Foundation, Partido of Magdalena (total = 76 songs, 2-20 songs/individual); and two in the Experimental Campus of the Instituto Nacional de Tecnología Agropecuaria, Partido of Campana (5 songs/individual). All these areas are in the northeast of Buenos Aires Province, Argentina. Recordings were made with a Uher 4000 Report-L at a speed of 9.5 cm/s, using a directional hypercardioid Lec 970 LEEA microphone. Only best quality recordings were sonographed using a Kay Electric Sonagraph 7029-A, set for wide band filters and the 80-8,000 Hz frequency range.

RESULTS AND DISCUSSION

Figure 1 is a catalog of *T. aedon* syllable types from Argentina mentioned herein. Figure 2 shows some *T. bewickii* songs and their mimetic equivalents sung by *T. aedon* in Oregon. Surprisingly, there is close resemblance between syllable types 6, 11, 12, 20, 24 and 25 (see Kroodsma 1973, pp. 348-349) of *T. bewickii* mimicked by *T. aedon* in Oregon, and syllables 22, 14, 16, 18, 13 and 31 of my catalog (containing a total of 38 syllable types) from Argentina. Each syllable was present in the songs of only one individual, except for syllable type 31 sung by 9 subjects. No individual had more than one of these syllables in its repertoire. These findings do not negate the fact that *T. aedon* can mimic *T. bewickii* songs in Oregon, but do suggest other alternative explanations for their occurrence in Argentina:

(a) *Chance resemblance.* Because *T. aedon* has a rich repertoire, chance alone could explain the occurrence of some syllables which resemble those of *T. bewickii*. This would be a null hypothesis, but is a very difficult hypothesis to test mainly because the lack of essential information required to predict what resemblance chance alone could product. However, more than 15% (6/38) of my *T. aedon* syllable catalog resemble *T. bewickii* syllables depicted in the literature, but "putative" cases of mimicry only represent 14% of the individual's repertoire of syllables. This is a small value compared with the 49% (18/37) and 42% (38/90) from two individuals reported by Kroodsma (1973) and could

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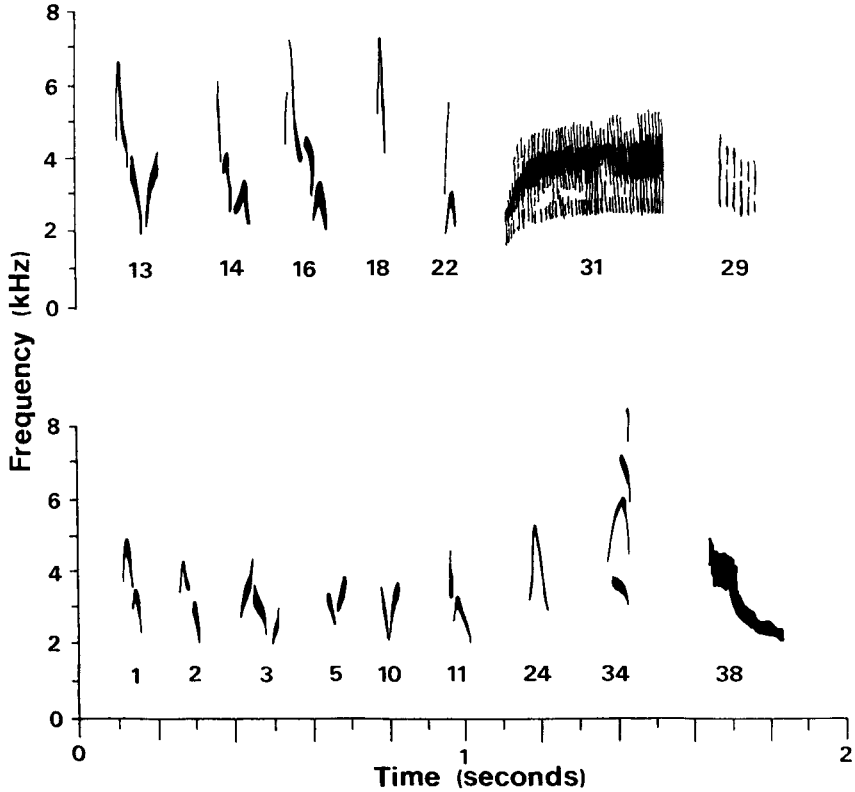


FIGURE 1. Sonograms of the syllable types of *Troglodytes aedon* mentioned in this study.

constitute an estimate of how much repertoire resemblances could be expected by chance.

(b) *Lack of divergence.* In addition to (a), it is possible that certain song features such as syllable structure and basic song organization exhibit a certain degree of canalization so that interspecific song resemblances between *T. aedon* and *T. bewickii* reflect their common phylogenetic origin (Dobkin 1979). Canalization also could constitute an explanation to the existence of recurrent syllable types (i.e., 1, 2, 3, 5, 10, 11, 24, 34, and 38 of my catalog) among populations of *T. aedon* from Argentina and North America (see Lanyon 1960, Borror 1964, Kroodsma 1973, Platt and Ficken 1987), as well as for the resemblance between syllable 29 (sung by 16 individuals of *T. aedon* reported in this study) and the "harsh chirts" observed in *Thryothorus ludovicianus* during its intraspecific agonistic encounters (Morton and Shalter 1977, p. 224).

(c) *Cultural introgression of T. bewickii's syllables.* *T. aedon* originally copied *T. bewickii's* syllables in North America and the copied repertoire spread through Central and South America by vocal imitation among *T. aedon* individuals. Although nothing is known about the cultural evolution in *T. aedon*, this hypothesis seems improbable, because it implies both an almost perfect mechanism of vocal imitation (e.g., without copy er-

rors) and a preferential copying of these syllables. For the same reason, the presence of common *T. aedon* syllable types in very distant populations, seems to require an explanation like that advanced in (b).

(d) *Mimicry of another species.* It is also possible that *T. aedon* from Argentina mimics a sympatric species whose song, in turn, has a chance resemblance to *T. bewickii* syllables. Since *T. aedon* has several common sympatric species at Campana, Luján and Magdalena areas, this hypothesis seems more tenable. Perhaps one of the best candidates to be imitated is the Hooded Siskin (*Carduelis magellanicus*), because of its abundance and enormous repertoire. There are resemblances between syllables 3, 11, 12, 20, 24, 25, 26 and 28 of *T. bewickii* (see Kroodsma 1973) and *C. magellanicus* syllables from Buenos Aires (Gabelli, pers. comm.).

In summary, the occurrence of *T. bewickii* syllables in the songs of *T. aedon* from Argentina does not constitute a case of mimicry of another wren species' song.

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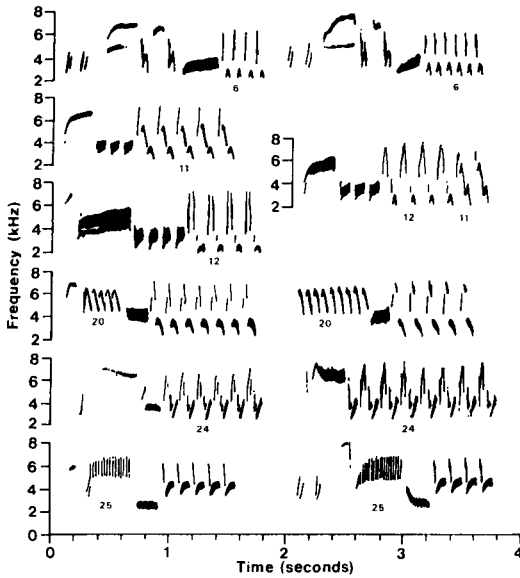


FIGURE 2. Songs of *Thryomanes bewickii* (left column) and *Troglodytes aedon* (right column) from Oregon. Numbers indicate corresponding syllable types of the *T. bewickii* song mimicked by *T. aedon*, mentioned in this study. (Reproduced with modifications from Kroodsmma 1973).

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NEST AND EGGS OF THE STRIPE-BACKED ANTBIRD (*MYRMORCHILUS STRIGILATUS*)¹

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Key words: Argentina; Copo Reserve; chaco woodland; eggs; Formicariidae; Myrmorchilus; nest.

The nest and eggs of the Stripe-backed Antbird (*Myrmorchilus strigilatus*, Formicariidae) have not been previously described. On 26 November 1988, we found a nest of this species in the Copo Reserve (26°15'S,

61°55'W, 114,000 ha), Santiago del Estero Province, Argentina, in an area of dry quebracho woodland with *Schinopsis quebracho-colorado*, *Aspidosperma quebracho-blanco* and *Zizyphus mistol*, dense and tall shrubs and open understory. The nest was on the ground in old secondary woods, quite like mature woodland. We discovered it in a fresh path opened to mist-net birds. The nest with the two eggs was moved 2 m away to a similar place. The adults remained near the nest. The next day the eggs had been rearranged by the adults, but three days later it was abandoned.

The nest was an open cup (Fig. 1), which measured

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